Before the
FEDERAL COMMUNICATIONS COMMISSION
WASHINGTON, D.C. 20554

SPECTRUM TASK FORCE REQUESTS INFORMATION ON FREQUENCY BANDS IDENTIFIED BY NTIA AS POTENTIAL BROADBAND SPECTRUM	)	**Public Notice (DA 11-444)** **ET Docket No. 10-123**

Comments of United States Cellular Corporation

United States Cellular Corporation ("USCC") hereby files in response to the Public Notice (DA 11-444) of the joint request of the Office of Engineering and Technology and Wireless Telecommunications Bureau for information on steps the Federal Communications Commission ("Commission") can take to best promote wireless broadband deployment in the 1695-1710 MHz and 3550-3650 MHz bands and their related ongoing assessment of the 1755-1850 MHz, 4200-4220 MHz and 4380-4400 MHz bands, and others identified by NTIA as candidates for commercial use.

Introduction

Timely implementation of the Commission's initiatives in its NBP [1] to make 500 megahertz of spectrum newly available for commercial broadband use within the next ten years and 300 megahertz between 225 MHz and 3.7 GHz available for mobile use within the next five years remains an urgent priority. As Chairman Genachowski stated at a

[1] Federal Communications Commission, National Broadband Plan, Titled" Connecting America: The National Broadband Plan (2010) ("NBP"), pp. 84-92.

recent White House presentation:

> "From e-commerce to social networks to entertainment and communications, American companies and entrepreneurs are leading the world in mobile innovation, creating enormous potential for exports abroad and economic growth at home. ... The opportunities of mobile communications are huge. We need to seize them. ... Now, all this mobile innovation relies on spectrum – the airwaves. Spectrum is the invisible infrastructure that's necessary for mobile communications." [2]

The challenge to find spectrum resources to meet these needs is particularly acute in the near term because the Commission has relatively little auctionable spectrum available in the pipeline to support expanded access to competitive mobile broadband services. Both the scope and the urgency of identifying additional spectrum for competitive mobile broadband services have been confirmed in the Commission's OBI Technical Paper No. 6, "Mobile Broadband: The Benefits Of Additional Spectrum, (October 2010) which concluded that the "broadband spectrum deficit" is likely to approach 300 MHz by 2014.

As noted in the Commission's Public Notice, President Obama issued an executive memorandum instructing the Secretary of Commerce, working through NTIA, to collaborate with the FCC to make available over the next 10 years a total of 500 megahertz of Federal and non-Federal spectrum, suitable for both mobile and fixed wireless broadband use.[3] NTIA has now identified a number of bands for Fast Track review and has asked the Commission to "take the necessary regulatory actions to make available for wireless broadband 15 megahertz at 1695-1710 MHz." [4] NTIA has also announced that it was conducting a detailed evaluation of the 1755-1850 MHz band to

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[2] See Chairman Julius Genachowski Remarks on Spectrum As Prepared for Delivery at The White House dated April 6, 2011.

[3] Presidential Memorandum: Unleashing the Wireless Broadband Revolution, dated June 28, 2010.

[4] Letter from Associate Administrator, Office of Spectrum Management, NTIA, to Chief, Office of Engineering and Technology, FCC, dated Jan. 19, 2011, available at http://www.ntia.doc.gov/filings/2011/NTIA_FCC_Letter_115%20MHz_01192011.pdf.

determine whether it can be repurposed for commercial broadband use. Each of these are positive developments which we support.

We continue to believe that the repurposing of Government spectrum in the 1695-1710 MHz and 1755-1850 MHz bands are the most promising of the various NTIA proposals described in the Commission's Public Notice.[5] Prompt and thorough review of possible pairings of 1675-1710 MHz spectrum with suitable bands to create additional bandwidth which can be used for wireless broadband services is important and should be expedited. We also support the continuation of consultations between the FCC and NTIA to explore ways that reallocation of government spectrum in a portion of the 1755-1850 MHz band might be feasible.

Discussion

1. The FCC Should Conduct a Prompt and Thorough Review of Possible Pairings of 1675-1710 MHz Spectrum with Suitable Bands to Create Additional Bandwidth for Mobile Broadband.

We support the recent efforts of the NTIA and the Commission to identify additional paired spectrum which could be deployed for mobile broadband uses. The fact that 1695-1710 MHz band is already allocated on a co-primary basis for federal and non-federal use and is in a spectrum range which is potentially suitable for mobile broadband uses recommends it as a potentially viable candidate for repurposing.

We also have concerns about the appropriate pairing of 1695-1710 MHz spectrum. We agree with comments filed by Verizon Wireless in this docket, that the Commission should choose spectrum for paired use with the 1695-1710 MHz spectrum

[5] We have no comment at this time on the possible commercial mobile uses of the spectrum identified by NTIA above 3 GHz. Technologies for commercial mobile deployment in these bands appear to be in the early stages of development so that less is known about potential technology availability, operating parameters, network architectures and cost characteristics.

which is compatible with and an extension of the existing AWS pairings.[6]

We have reservations about possible near term deployment of paired spectrum incorporating the 1695-1710 MHz band because this spectrum is not in a globally harmonized band or even adjacent to such a harmonized band. As a non-harmonized pairing, it does potentially raise questions about time to market availability of infrastructure and devices, the breadth of vendor support, the pace of device development, and increased cost of equipment reflecting the diminished market size for devices in non-harmonized bands.

The Commission's Public Notice asks for comment on the usefulness of the 1695-1710 MHz band if the NTIA were to require that any non-federal licenses be conditioned to preclude operations in eighteen 72 to 121 km-radii exclusion zones around co-channel Federal earth station operations. The Commission's Public Notice indicates that approximately 12.65 percent of the U.S. population resides within the areas encompassed by these proposed exclusion zones. We believe that the urgent need for expanded commercial mobile spectrum resources justifies further detailed examination of possible options for full clearing of incumbent Federal uses in the 1695-1710 MHz band. The Commission's Public Notice mentions geographic exclusion as a possible method to permit shared use which we support as an interim step provided it eventually leads to full clearing. Also the Commission has received widespread comment on dynamic spectrum access technologies and techniques in ET Dkt. No. 10-237 which should be examined to determine whether they are suitable in some cases to promote spectrum sharing in the 1695-1710 MHz band.

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[6] Comments of Verizon Wireless dated June 28, 2010, p.6.

2. The FCC Should Continue its Consultations With NTIA to Examine Ways That Reallocation of Government Spectrum in a Portion of the 1755-1850 MHz Band Might be Feasible.

We strongly support NTIA's selection of the 1755-1850 MHz band for Fast Track evaluation to determine whether it can be repurposed for commercial broadband use. Specifically we support the T-Mobile proposal [7] in GN Docket Nos. 09-157 and 09-51, WT Docket No. 09-66 and now in these proceedings to allocate federal spectrum in the 1755-1780 MHz band, which might be paired with the 2155-2180 MHz band.

We still believe that T-Mobile's proposal has merit and deserves additional scrutiny to determine under what circumstances this proposal might be feasible. For example, the pairing of 1755-1780 MHz with 2155-2180 MHz is intended to implement an expansion of 3GPP Band 10 specifications (i.e. through the expansion of Band 10 by adding 10 MHz to each of its uplink and downlink blocks). This pairing permits infrastructure and device developers to leverage the extensive Band 10 work already completed by the wireless industry thereby diminishing time to market and development costs for their infrastructure and devices. It also builds on the extensive experience and best practices developed in the prior relocation of federal uses in the 1710-1755 MHz band to facilitate relocation of similar uses in the 1755-1780 MHz band. Adoption of this proposal would also harmonize spectrum uses across multiple jurisdictions enabling equipment vendors to achieve economies of scale resulting in reduced infrastructure and device costs for providers and end users.

As we discussed above in connection with the 1695-1710 MHz band, full clearing

[7] Comments of T-Mobile USA, Inc., in GN Docket Nos. 09-157, and 09-51, and WT Docket No. 09-66, filed September 30, 2009, p. 4.

of 1755-1780 MHz spectrum would also be optimal. But the fact that such full clearing may not be feasible in the near term should not preclude or delay reallocation of this spectrum for commercial mobile uses. All viable methods for spectrum sharing should be evaluated including continued efforts to find ways for Federal incumbent uses in this band to be better managed so that shared commercial mobile uses can be accommodated.

Conclusion

We agree with the Commission's estimates that during the next few years the demands for expanded commercial mobile spectrum will intensify as the wireless industry transitions to Broadband. There are very few obvious candidate bands where spectrum will be available for auction in the 2011-2012 timeframe as recommended in the FCC's NBP. The challenge is to find new bands which can be reallocated and integrated with existing allocations to provide the 300 megahertz of new spectrum between 225 MHz and 3.7 GHz on or before 2015 (NBP Recommendation 5.8). We support expedited review of possible pairings of 1675-1710 MHz spectrum with suitable bands to create additional bandwidth for wireless broadband services to be licensed by auction selection in this timeframe. We also support continued FCC-NTIA consultation and analysis of the possible reallocation of the 1755-1850 MHz band. The Commission should take a holistic approach to band plan development incorporating 1695-1710 MHz spectrum and 1755-1780 MHz spectrum, as compatible extensions of the existing AWS band.

Respectfully submitted,

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